

WHAT IS CLAIMED:

1. A stent, comprising:

a cylindrical body having a plurality of rings aligned along a common longitudinal axis, the rings including struts defining a plurality of first peaks and a plurality of second peaks;

at least one link connecting a second peak of one ring with a second peak of another ring and having an undulating portion; and

at least one peak adjacent each link having struts defining a shorter longitudinal length than another first peak adjacent the link to thereby provide a space for the undulating portion.

2. The stent of claim 1, wherein of the plurality of second peaks only those second peaks of adjacent rings which are connected by a link are in phase.

3. The stent of claim 1, wherein each of the plurality of first peaks of adjacent rings are out of phase.

4. The stent of claim 1, wherein each ring has six second peaks and six first peaks, three of the first peaks defined by struts which are shorter than struts defining other first peaks and spaced in an alternating pattern around a circumference of the ring.

5. The stent of claim 4, wherein the first peaks and second peaks of longitudinally adjacent rings are configured such that only three second peaks of adjacent rings are aligned.

6. The stent of claim 5, wherein the three aligned second peaks of longitudinally adjacent rings are connected by links, each link having an undulating portion characterized by two circumferentially extending transitions.

7. The stent of claim 1, wherein the stent is formed from metal.

8. The stent of claim 7, wherein the metal is taken from the group of metals including stainless steel, titanium, nickel-titanium, cobalt-chromium, cobalt-chromium-vanadium, cobalt-chromium-tungsten, gold, silver, platinum, or platinum iridium.

9. The stent of claim 1, wherein each link has two circumferentially extending transitions.

10. The stent of claim 1, wherein each link has three circumferentially extending transitions.

11. The stent of claim 1, each link further comprising transitions extending generally perpendicular to a longitudinal axis of the stent, the perpendicular transitions having a long portion directed towards an adjacent shortened first peak and a relatively shorter portion directed towards an adjacent longer first peak.

12. The stent of claim 1, wherein all the second peaks of adjacent rings are connected by links.

13. The stent of claim 1, wherein all links have undulating portions.

14. The stent of claim 1, wherein the links have varied lengths.

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15. The stent of claim 1, wherein the struts have varied thicknesses.

16. The stent of claim 1, wherein the struts have varied widths.

17. The stent of claim 1, wherein at least one ring has a different number of first peaks than another ring of the stent

18. The stent of claim 1, wherein at least one ring has a different number of second peaks than another ring of the stent.

19. A stent having a compressed configuration, comprising:
a body including a plurality of longitudinally arranged adjacent rings,
each ring including a plurality of alternating peaks; and
at least one link joining one ring with an adjacent ring, the link including
5 an undulated portion;
wherein at least one ring includes a peak configured to provide a space
for an undulating portion when the stent placed in a compressed configuration.

20. A stent, comprising:
a cylindrical body having a plurality of rings aligned along a common
longitudinal axis, the rings including struts defining a plurality of first peaks and a
plurality of second peaks;
5 at least one link connecting a second peak of one ring with a second peak
of another ring and having an undulating portion;
at least one peak adjacent each link having struts defining a shorter
longitudinal length than another first peak adjacent the link to thereby provide a space
for the undulating portion;

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10 wherein each ring has six second peaks and six first peaks, three of the first peaks defined by struts which are shorter than struts defining other first peaks and spaced in an alternating pattern around a circumference of the ring; and

 wherein the first peaks and second peaks of longitudinally adjacent rings are configured such that only three second peaks of adjacent rings are aligned.

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